What is claimed is:

1. A system for monitoring intracellular binding interactions, comprising:

a reaction vessel having disposed therein a cell suspension comprising biological cells having at least a first component of a binding reaction disposed within the cells, and a second component of the binding reaction comprising a non-protein molecule and having a fluorescent label associated therewith; and

a detector in sensory communication with contents of the reaction vessel, the detector being configured to detect an amount of polarized fluorescence emitted from the reaction vessel.

2. The system of claim 1, wherein the reaction vessel comprises a well in a multiwell plate.

3. The system of claim 1, wherein the reaction vessel comprises a microfluidic channel.

4. The system of claim 1, wherein the second component of the binding reaction comprises a binding fragment of a full length protein that is capable of binding the first component.

5. The system of claim 4, wherein the second component is between about 4 and 100 amino acid residues in length.

6. The system of claim 4, wherein the second component is between about 4 and about 50 residues in length.

7. The system of claim 4, wherein the second component comprises a molecular weight that is less than about 10 kD.

8. The system of claim 4, wherein the second component comprises a molecular weight that is less than about 5 kD.

9. The system of claim 4, wherein the second component comprises a carbohydrate, a lipid, cAMP, cGMP or diacylglycerol.

10. The system of claim 1, wherein the first component of the binding reaction comprises an intracellular nucleic acid binding protein and the second component comprises a nucleic acid probe.

11. The system of claim 10, wherein the nucleic acid probe is from about 5 to about 100 bases in length.

12. The system of claim 10, wherein the nucleic acid probe is from about 10 to about 50 bases in length.

13. The system of claim 10, wherein the first component comprises a DNA binding protein and the second component comprises a fluorescently labeled DNA probe.

14. The system of claim 10, wherein the nucleic acid probe comprises a translocation functionality.

15. The system of claim 14, wherein the translocation functionality comprises a translocating peptide.

16. The system of claim 15, wherein the translocating peptide comprises Antp-HD or a fragment thereof.

17. The system of claim 15, wherein the translocating peptide comprises a polypeptide that includes a sequence homologous to residues 48-60 of an HIV-1 tat protein (SEQ ID NO:1).

18. The system of claim 10, wherein the nucleic acid binding protein is a component of a cell signaling pathway, activation of the pathway activating or deactivating the nucleic acid binding protein.

19. The system of claim 1, wherein the cell is selected from a mammalian cell, bacterial cell, fungal cell, yeast cell, insect cell, and a plant cell.

20. The system of claim 19, wherein the cell is a mammalian cell that is selected from a CHO cell, a HEK-293 cell, a L-cell, a 3T3 cell, a COS cell, a THP-1 cell, a RBL-1 cell, a YB-1 cell, a Jurkat cell and a U937 cell.

21. The system of claim 1, wherein the cell is disposed in a suspension of cells.

22. The system of claim 1, wherein the reaction vessel comprises a window providing optical access.

23. The system of claim 22, wherein the reaction vessel comprises a test tube.

24. The system of claim 22, wherein the reaction vessel comprises a cuvette.

25. The system of claim 22, wherein the reaction vessel comprises a well in a multiwell plate.

26. The system of claim 22, wherein the reaction vessel comprises at least a first fluidic channel.

27. The system of claim 26, wherein the first fluidic channel comprises at least a first microscale fluidic channel disposed within a body structure.

28. The system of claim 27, wherein the microscale fluidic channel comprises a first of at least two intersecting microscale channels disposed in the body structure.